

Invest in Italy 

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A worldwide excellence in the Pharma & Biotech industry

2024

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Why Invest in Italy


The Life Sciences industry is extremely relevant for the Italian economy: **it accounts for 11% of the national GDP**. When it comes to Pharma & Biotech, Italy is recognized as one of **the most competitive and vibrant hubs in Europe**.



Second in Europe by **number of pharma enterprises** and **leader in CDMO manufacturing**




Strongly export-oriented, with the **highest export growth** of medical and pharma among Top EU economies



About **60,000 graduates** per year and **over 350,000 enrolled students** in Life Sciences



Competitive labour cost when compared to other leading European economies




Dynamic synergies among universities, research hospitals, R&D centers, and innovation hubs



Constant growth of **pharma R&D investments**, reaching a total value of **€ 1.87 bln** in 2022



Leader worldwide and in the EU in different Life Sciences fields by **number of scientific citations**



High government commitment to boost strategic national industries, also through the **National Recovery Plan**

Industry Overview

Pharma industrial base

Pharma employees in Italy

Top 6 Regions

(> 2,001 employees)



Nace codes:

C 21 - Manufacture of pharmaceuticals, medicinal chemical and botanical products



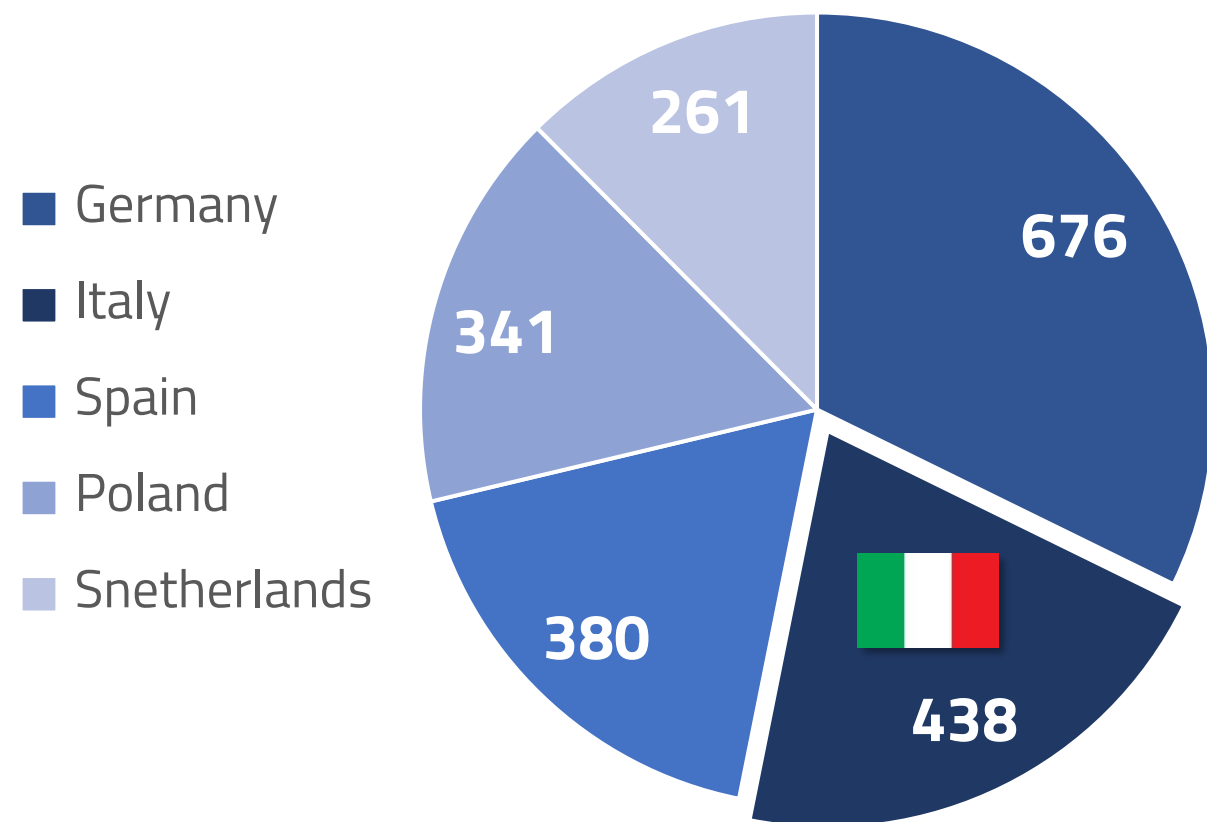
Source: Italian National Institute of Statistics (ISTAT, 2021)

*Local units are facilities through which a company operates in addition to its headquarters.

Pharma industry and export

Top EU countries for no. of pharma companies

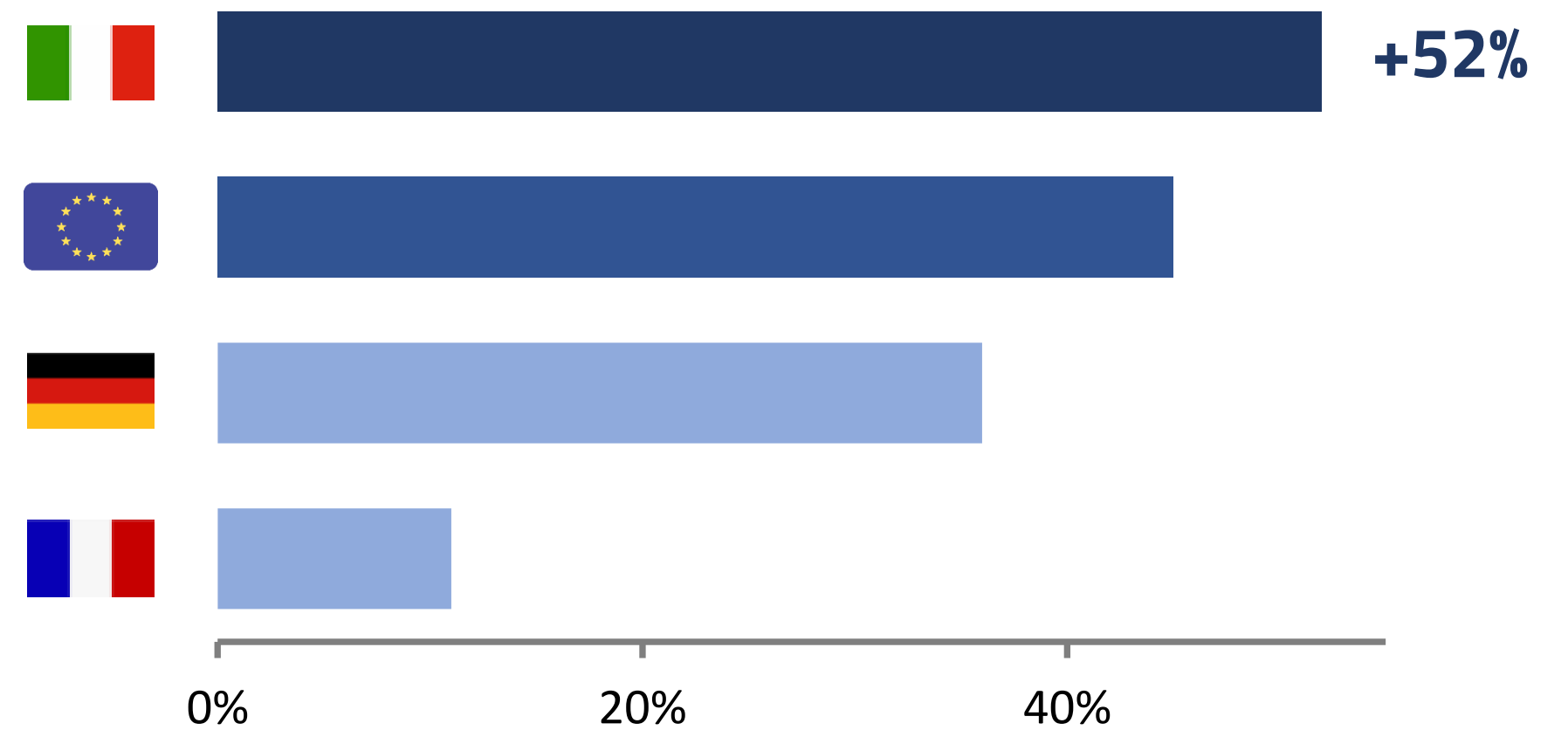
(NACE Code C 21, 2022)



- Italy ranks **2nd in the EU for no. of companies** involved in the manufacture of pharma products and preparations
- **A balanced mix** between Italian and foreign owned companies with excellent pool of **leading Italian pharma companies**

Medical & Pharma export growth – selected EU countries (2019 - 2023)

(% change)



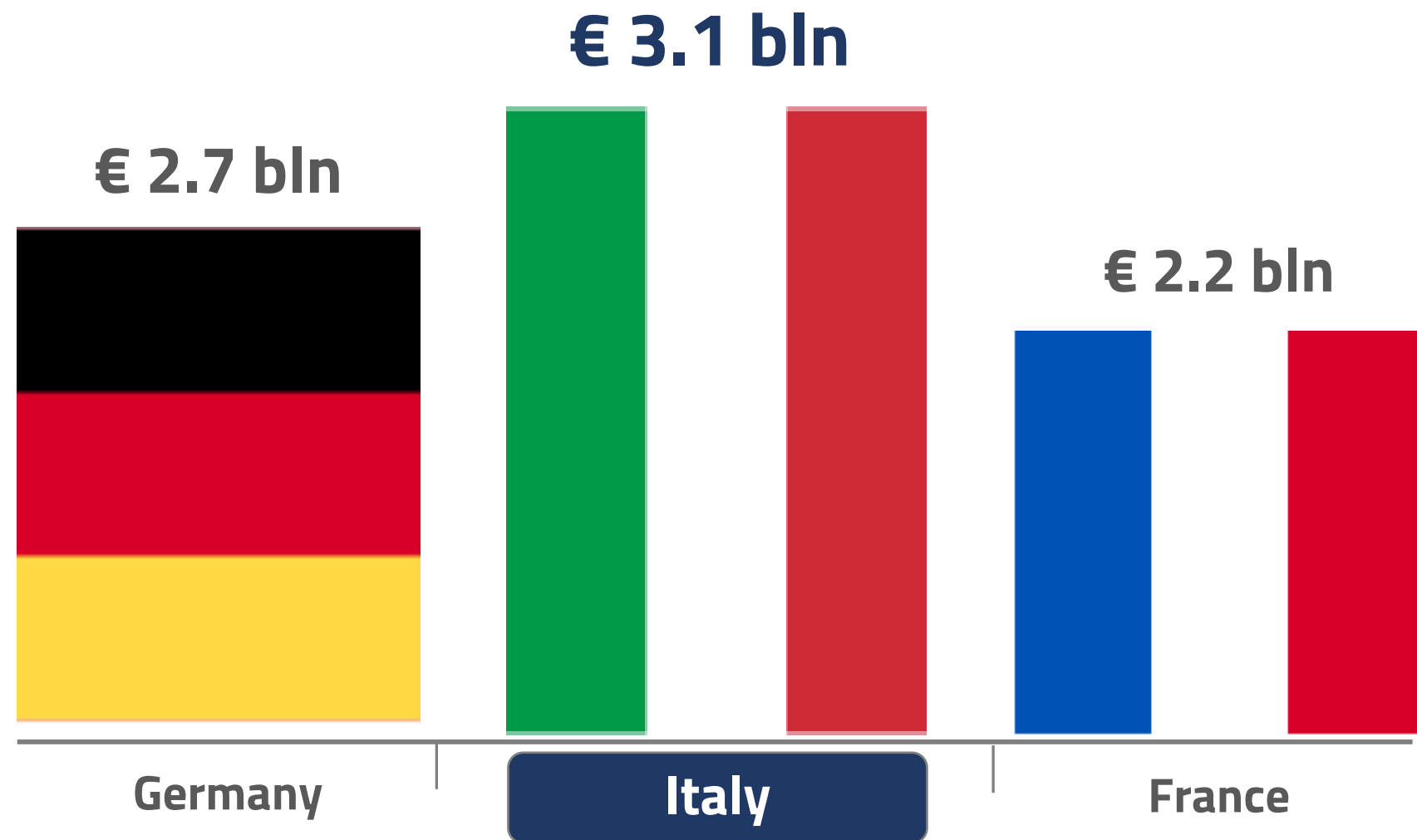
- **Over the last five years** medical and pharma products export in Italy has grown **more than the other EU biggest economies as well as the EU average**
- In 2023, the export of the Italian pharma industry reached **a value of over € 48 bln**

Pharma manufacturing expertise

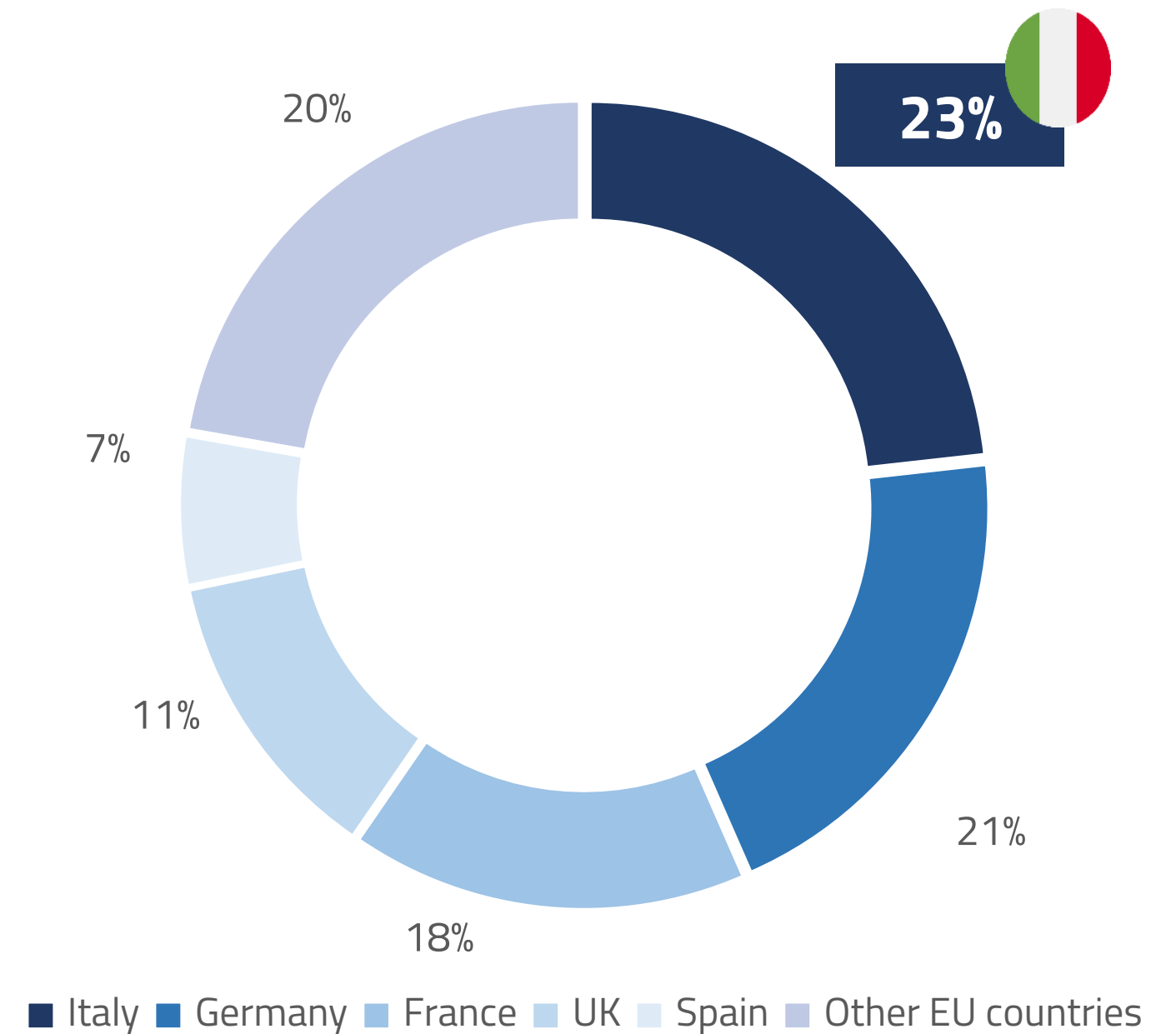
Italy ranks 1st by **pharma CDMO manufacturing value** among EU countries, with a share of 23% over the EU total

Top 3 EU countries by pharma CDMO manufacturing value

(2022)



Production value: share over EU total

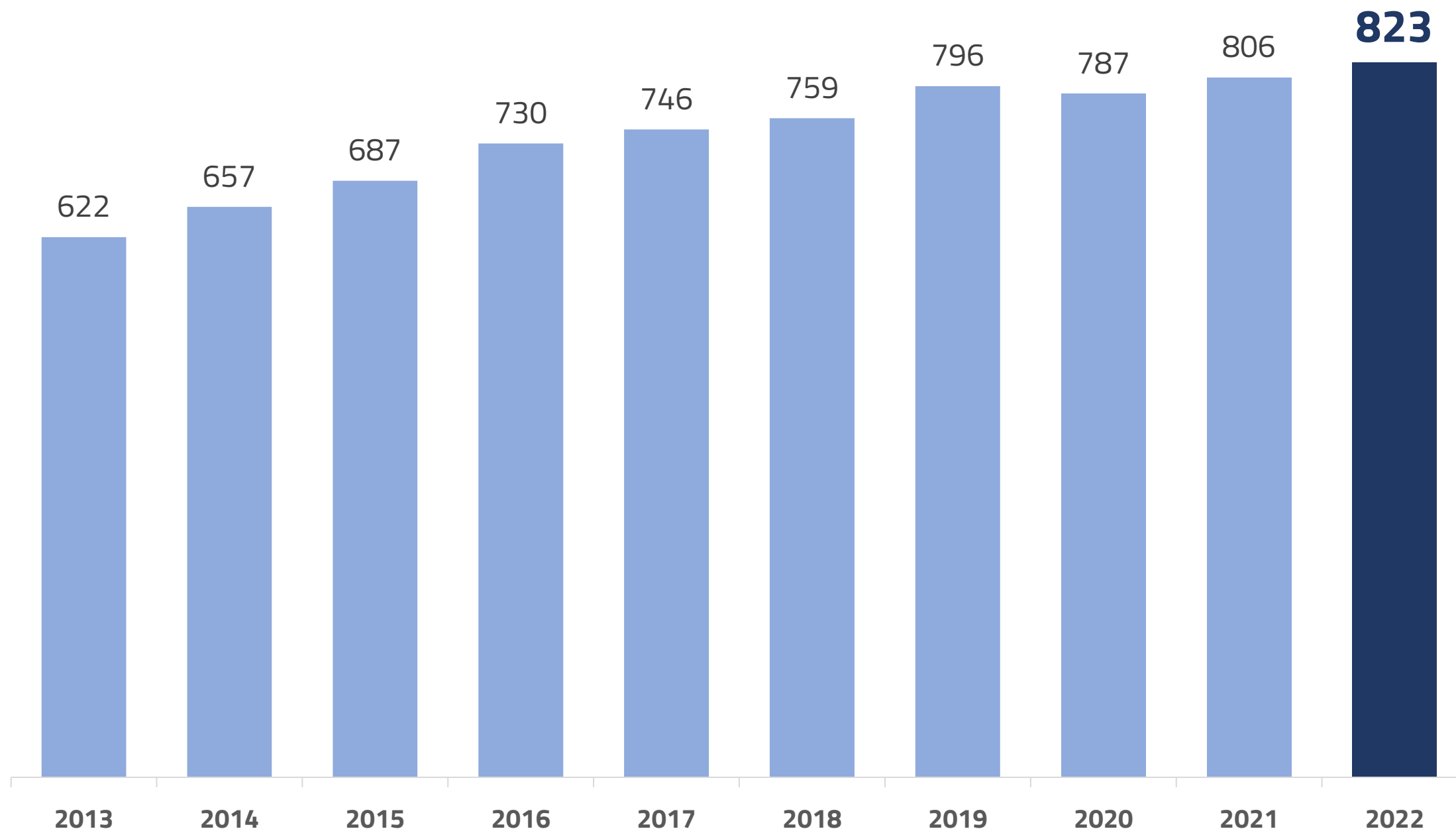


Source: Farmindustria (2023)

Italian biotech firms: a constant growth

Over the **last 10 years**, the number of biotech firms in Italy has constantly grown (+32%)

Number of Italian biotech firms (2013-2022)



HEALTH SEGMENT

Out of the **823 biotech firms** registered in 2021 in Italy, **about 50% of them are active in the health industry.**

Home to international players

Some Life Sciences global leaders with recent investments in Italy

with R&D labs, manufacturing activities, and more

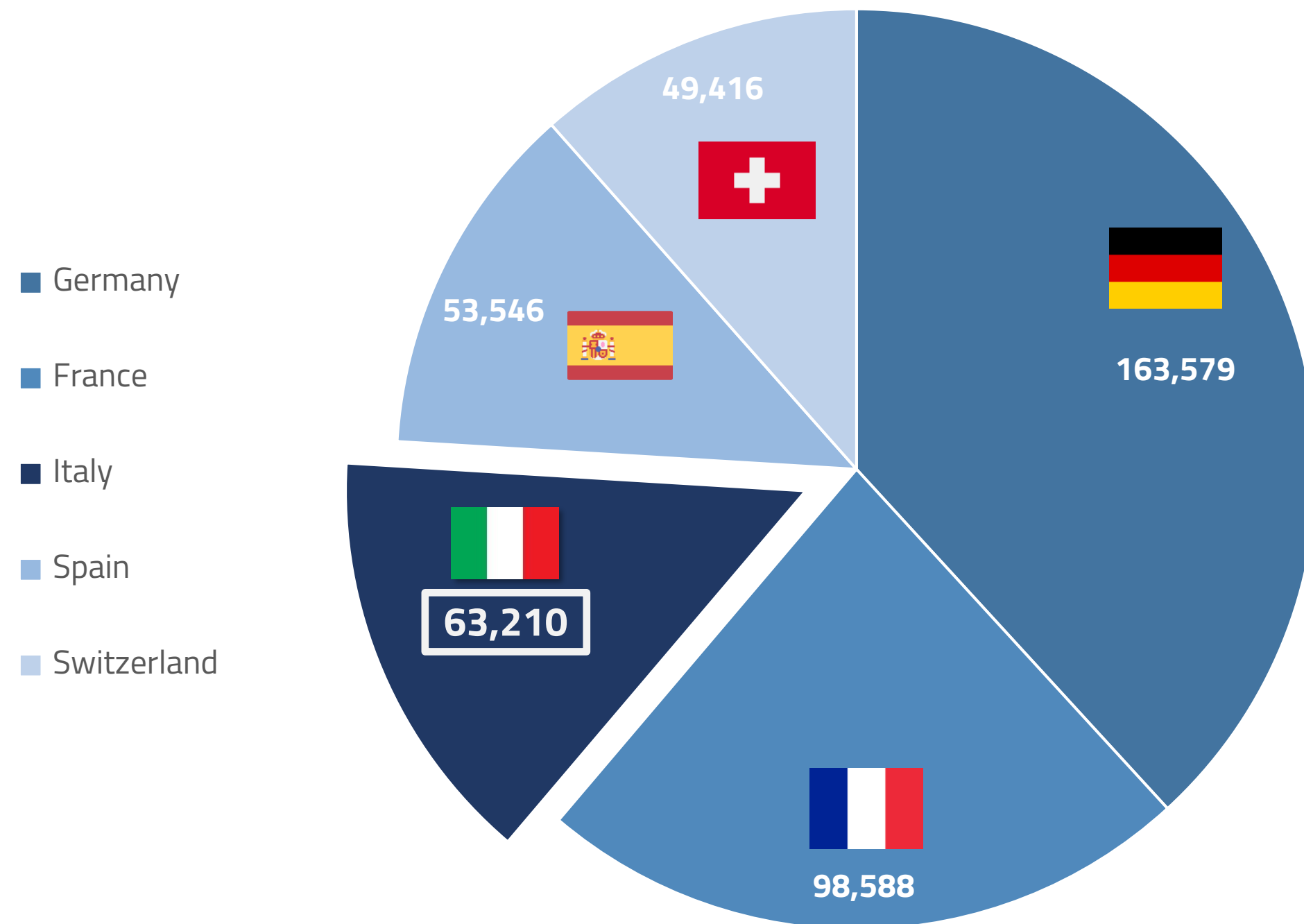


Source: Reprint database.

Talent Pool

Pharma employees in Europe









2022 Top European countries for no. of employees in pharma (NACE Code C 21)



- Italy ranks **3rd in Europe** for no. of employees in the manufacture of pharma products and preparations
- **Highly qualified:** 90% with secondary school certification or university degree

Academic human capital (1/2)

Students and graduates in Life sciences-related disciplines per year

	UNIVERSITY COURSES	2022 GRADUATES	2022/23 STUDENTS
	PHARMACY AND INDUSTRIAL PHARMACY	4,986	41,563
	BIOTECH AND BIOTECH TRADES	5,950	26,632
	BIOLOGY	7,632	40,914
	BIOMEDICAL ENGINEERING	1,730	6,017
	MEDICINE AND DENTISTRY	11,465	104,784
	HEALTHCARE ASSISTANCE	19,723	91,875
	NUTRITION AND HEALTH SCIENCE	4,256	20,724
	CHEMISTRY AND CHEMISTRY TRADES	4,179	19,559



The Italian university system boasts a **large number of students and graduates in disciplines related to life sciences**, thus generating a **cutting-edge talent pool of human resources** available for innovative companies

60,000
graduates

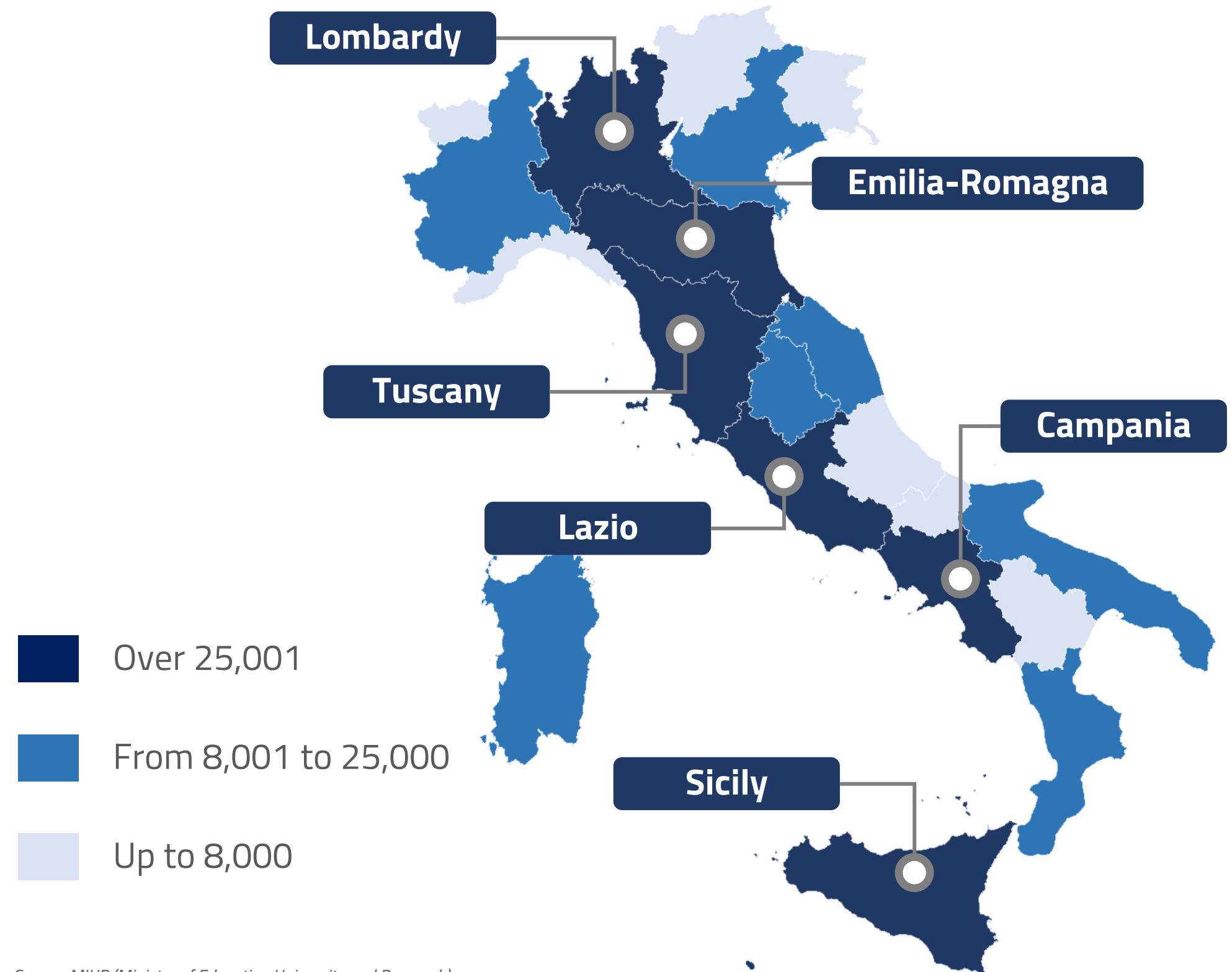
350,000+
students

Source: MIUR (Ministry of Education University and Research)

Academic human capital (2/2)

Regional distribution of students in Life-sciences disciplines (2022/23)

- **340,000+ students** and **about 60,000 graduates per year** in Life Sciences-related disciplines
- A **cutting-edge talent pool of human resources** available for innovative companies
- The **Top 6 regions** by number of students are **Lombardy, Lazio, Emilia-Romagna, Campania, Sicily** and **Tuscany**

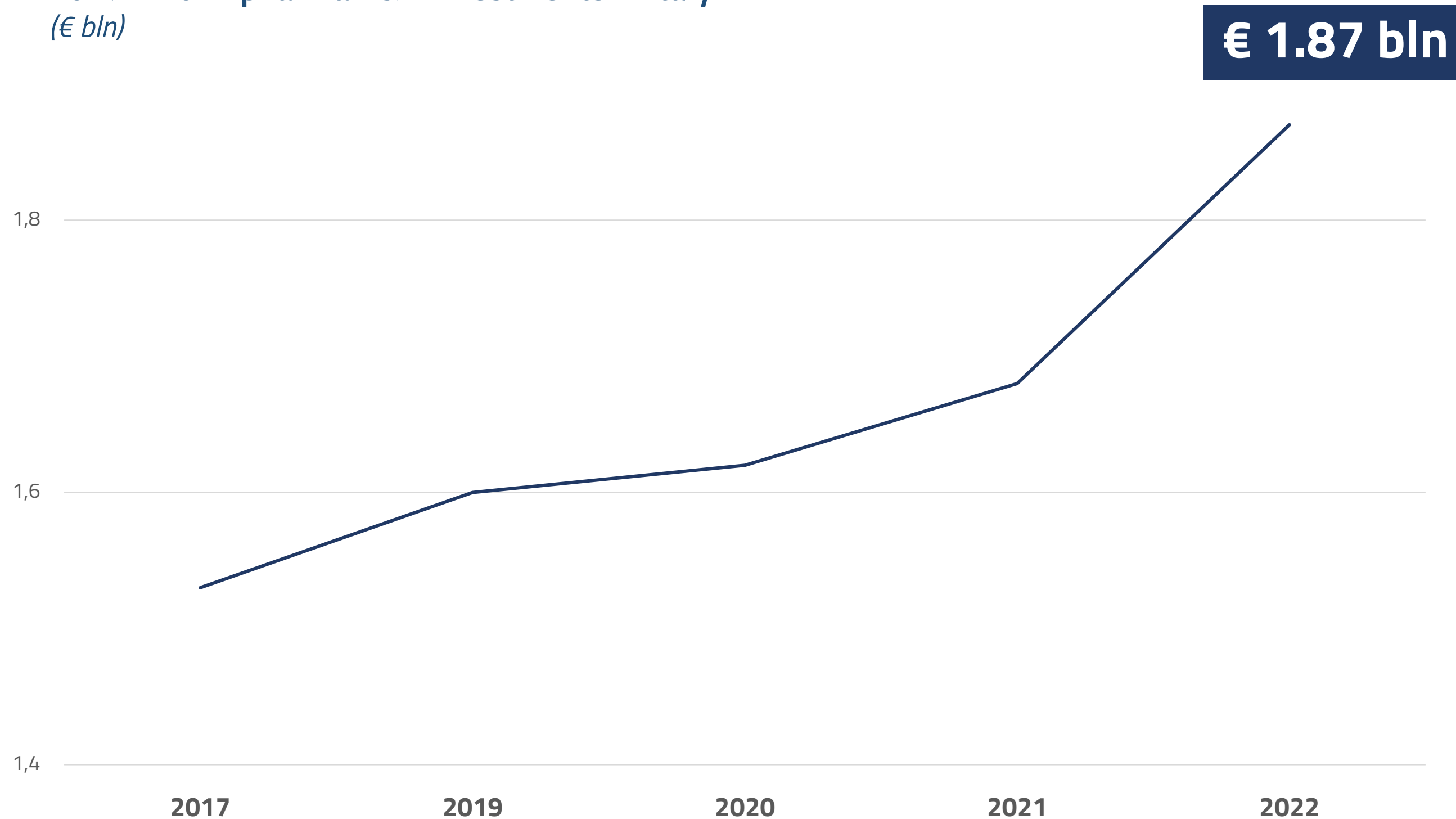


Source: MIUR (Ministry of Education University and Research)

R&D expertise

Positive trend of pharma R&D investments

2017 – 2022 pharma R&D investments in Italy
(€ bln)



- **€ 1.87 bln** pharma R&D investments (2022)
- Since 2017, **R&D investments increased by 17%**
- In 2022, the number **employees dedicated to R&D** in the pharma industry was equal to **6,900**

Key figures in biotech R&D



*Investments in R&D
(bln €)*

*Investments in
biotech R&D (bln €)*

*Biotech R&D
employees*

TOTAL
BIOTECH FIRMS

1.85

0.59

4,940

FIRMS DEDICATED TO
BIOTECH R&D

0.50

0.48

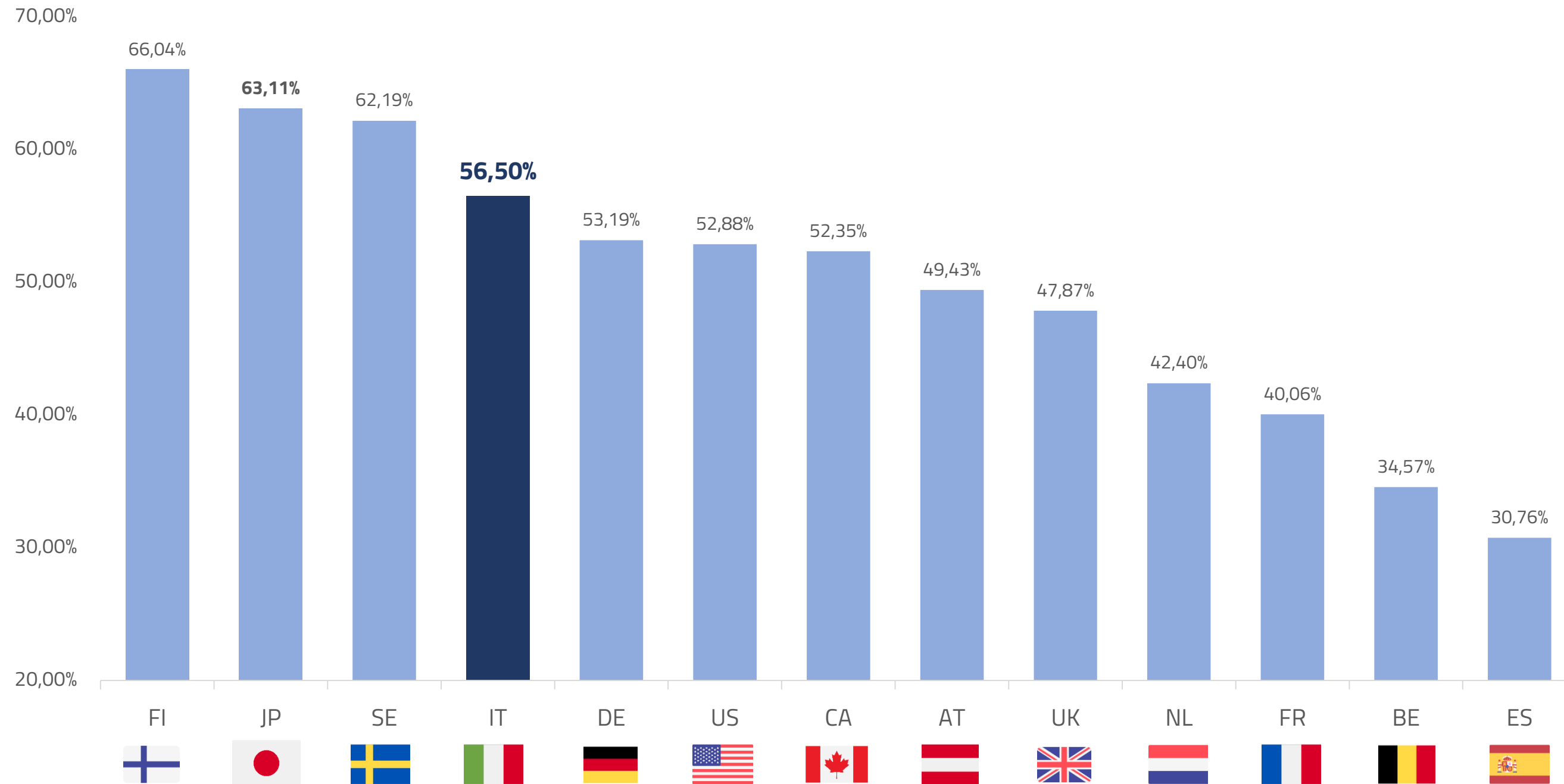
3,914

The biotech industry is characterized by a **high density of R&D activities**, and Italy is no exception:

- **R&D investments amounted to € 1.85 bln** in 2022 – **14% of the total turnover**
- Of the total R&D investments, **27% comes from firms fully dedicated to biotech R&D** (€ 0.5 bln)
- The number of **biotech R&D employees** (4,940) corresponds to **36% of the industry employees**

R&D Productivity

2018-2022 Worldwide Countries by patent productivity in Life sciences
(selected countries - granted applications / filed applications)



Italian research ecosystem ranks 4th worldwide by patent productivity, showing an **extremely high quality of R&D activities** conducted in the country

Source: elaboration of data from the European Patent Office

Top research in Life Sciences

Italy is among the **leading countries worldwide by number of scientific citations** (2022).

Italian research ranks **1st among EU countries** as well as **Top 3 and 5 in the world** in **about 30 life sciences-related disciplines**

2° in the EU
5° Worldwide
for citations in
Medicine



Top 3 worldwide



Top 5 worldwide



1° IN THE EUROPEAN UNION

- | | |
|--|--|
| <ul style="list-style-type: none"> • Biochemistry • Cancer Research • Cardiology and cardiovascular medicine • Clinical Biochemistry • Dermatology • Endocrinology | <ul style="list-style-type: none"> • Nephrology • Neuroscience • Oncology • Otorhinolaryngology • Pediatrics and child health • Urology |
| <ul style="list-style-type: none"> • Aging • Drug Discovery • Endocrinology, diabetes and metabolism • Epidemiology • Gastroenterology • Hepatology • Infectious diseases • Microbiology | <ul style="list-style-type: none"> • Obstretic and Gynecology • Ophthalmology • Pathology and forensic medicine • Pharmacology • Pulmonary and respiratory medicine • Reproductive medicine • Rheumatology • Surgery |

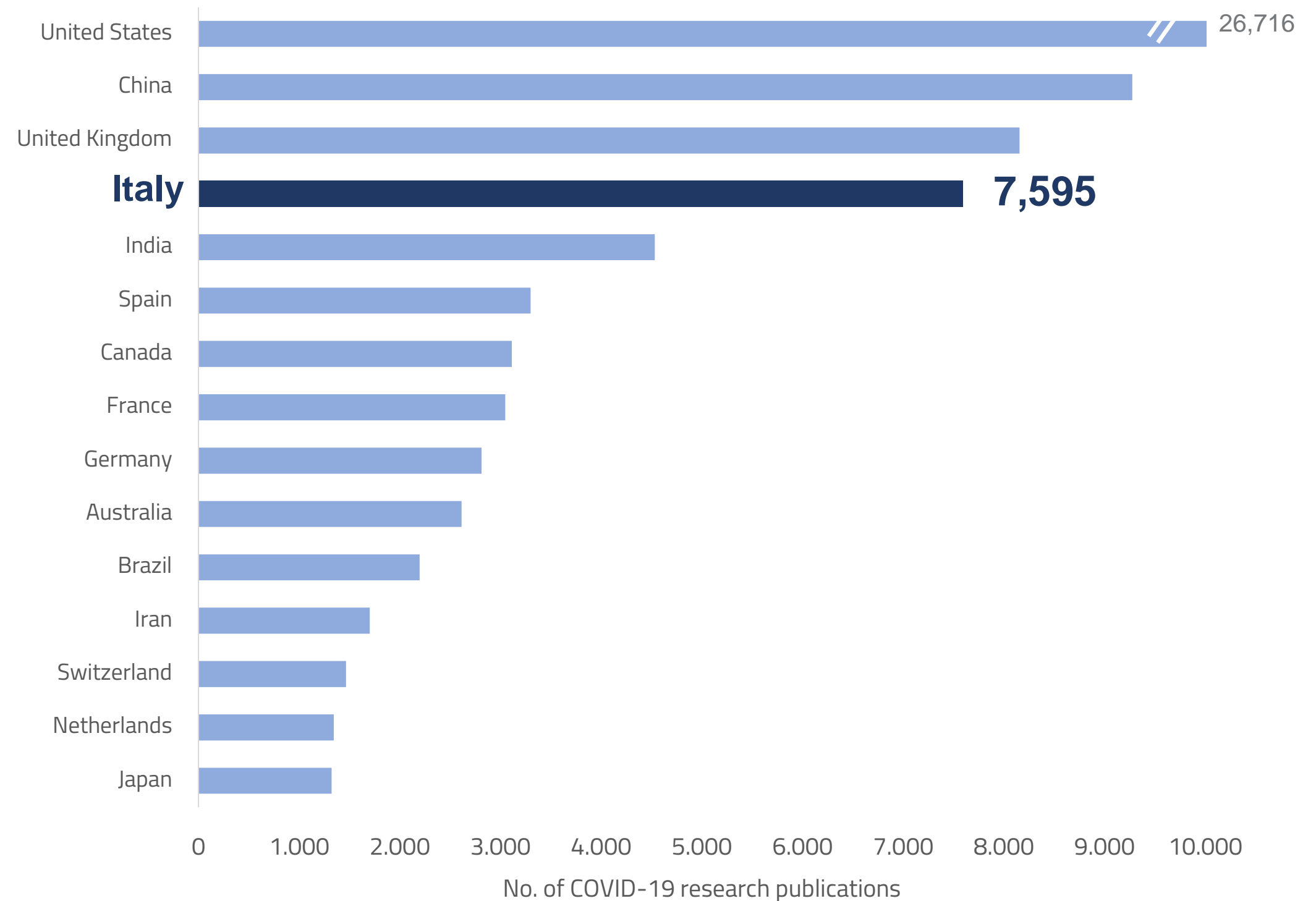
At the forefront of the COVID-19 response



The excellence of the Italian research has also emerged during the pandemic, contributing with **a total of 7,595 COVID-19-related publications** (2020).

As a matter of fact, **Italy ranks 4th worldwide and 1st among EU countries.**

Top 15 contributors to COVID-19 research publications



European leader in Clinical Research

2020-2022 Clinical Trials (CT) per year: EU – Italy comparison

Year	CT in the EU*	CT presented in Italy	% Italy / EU	CT authorized in Italy	% Italy / EU
2020	3,671	815	22.2	683	18.6
2021	3,732	965	25.9	818	21.9
2022	2,169	790	36.4	663	30.6

- About half of CTs are in the fields of **oncology** and **neurology**
- Most growing CTs' field: **rare diseases** (37.6% of total)
- Excellent synergy among NHS, universities and companies

* no. of studies uploaded in the European system

Key innovation players

LOCAL CLUSTERS

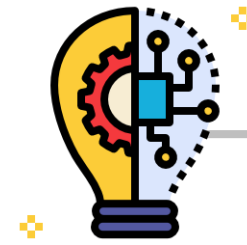
Territorial networks connecting a wide range of **players in the LS industry**

Open innovation in Life Sciences: over the last 10 years, **R&D partnerships** in the country registered a **growth of +95%**



INNOVATION HUBS

A strong presence of **innovation hubs dedicated to technology transfer**



R&D CENTERS

18 CNR Centres conducting research in Life Sciences



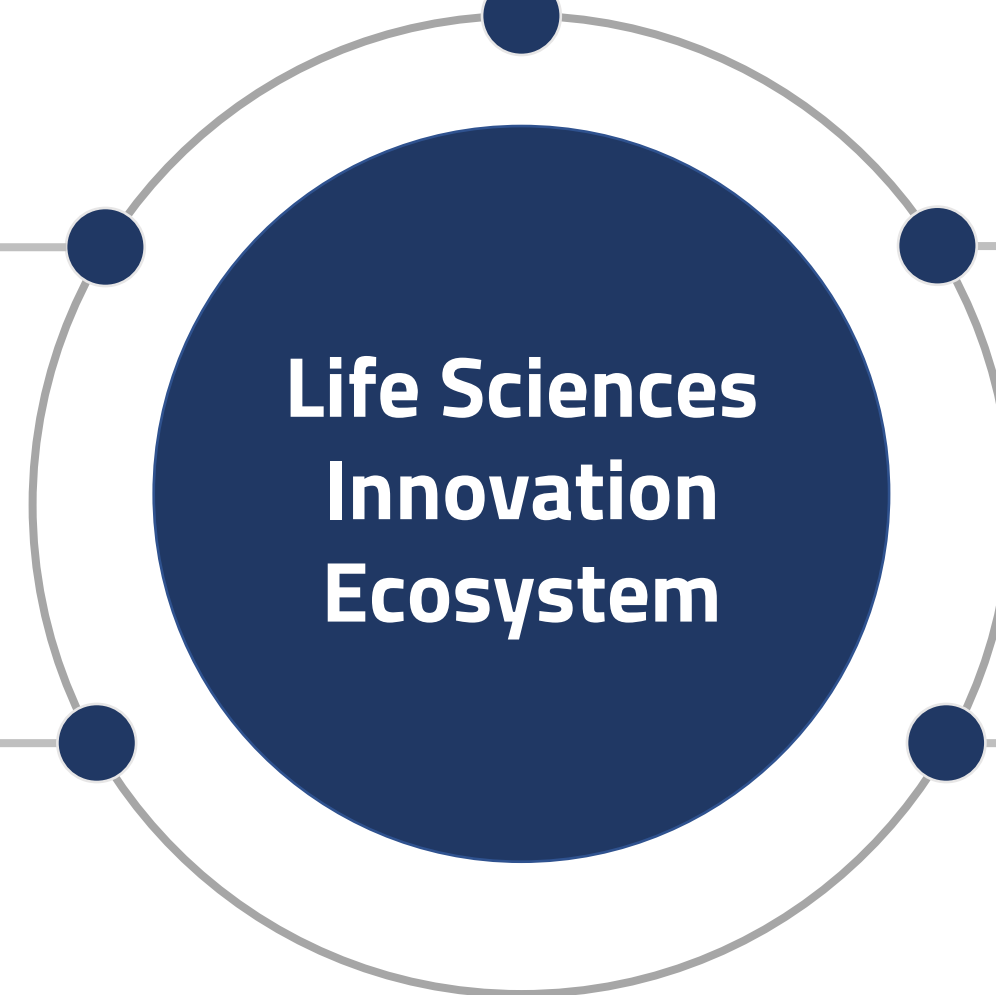
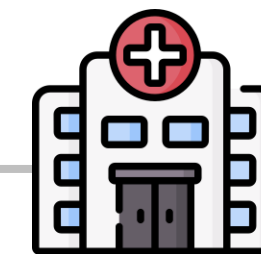
UNIVERSITIES

Over **50 universities** with life sciences-related programmes



IRCCS (research hospitals)

About **50 research hospitals** are recognised and promoted by the Ministry of Health



**Life Sciences
Innovation
Ecosystem**



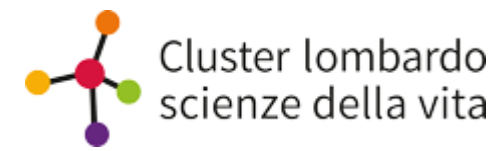
Clusters

The Italian innovation ecosystem is populated by a significant number of **territorial clusters**, which act as true regional **points of reference for all those players (e.g. companies, universities, research centers) interested in Life Sciences.**

At the national level, the **ALISEI Life Science Cluster** guides and boosts research and development, innovation, and technology transfer in the life sciences industry.



Lombardy's Life Sciences Cluster,
Lombardy



Innovation Hub Trentino, *Trento*



FVG's Life Sciences Cluster,
Friuli-Venezia Giulia



PLSV,
Liguria

Clust-ER Health,
Emilia-Romagna



Tuscany Life Sciences Cluster,
Tuscany



Cluster of Health, Innovation and Community,
Lazio

Health and Biotech hi-tech District,
Apulia



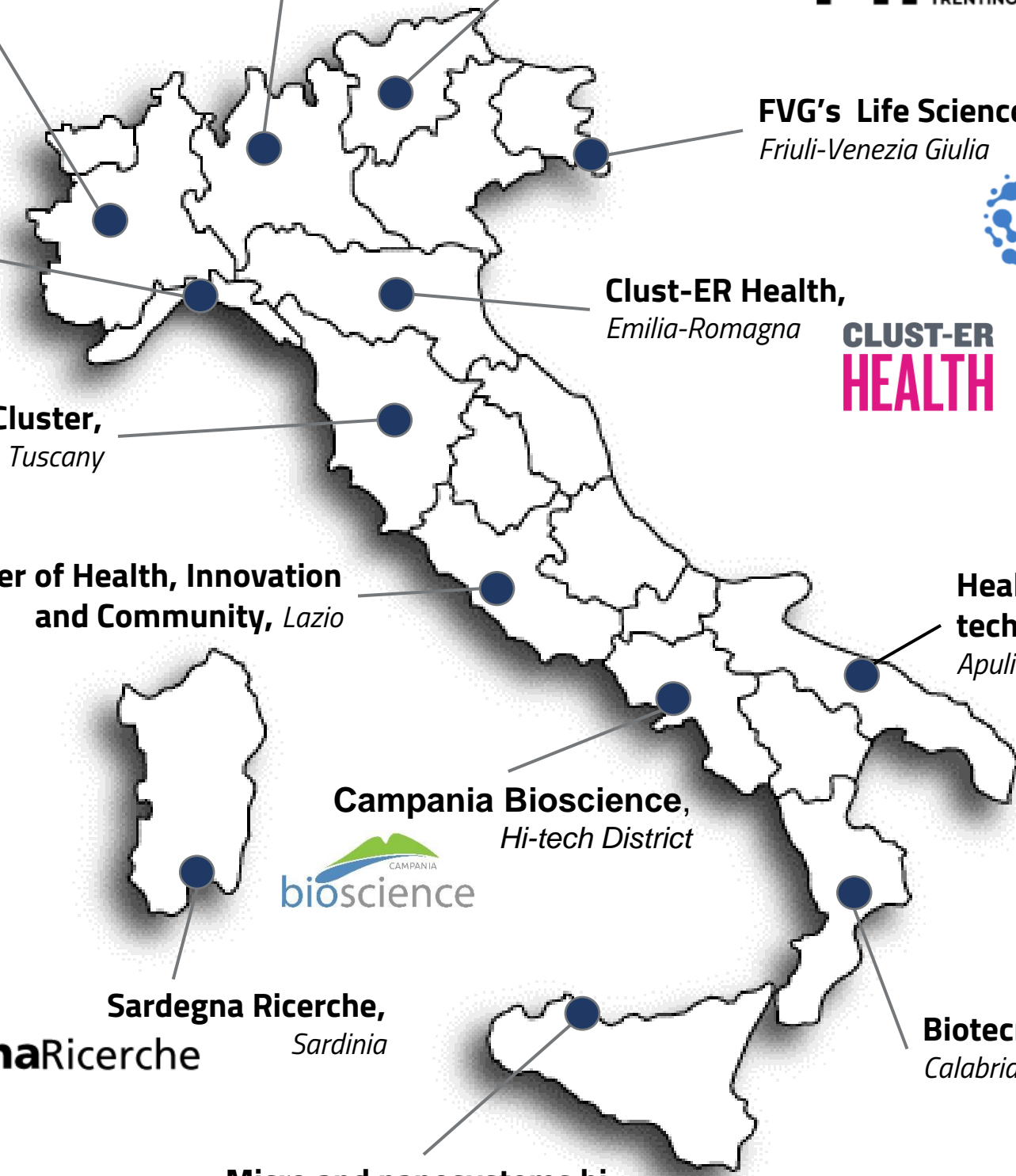
Campania Bioscience,
Hi-tech District

SardegnaRicerche,
Sardinia

Biotechnomed,
Calabria Life Sciences



Micro and nanosystems hi-tech district,
Sicily



Public Commitment & Incentives

The Italian NRRP (1/2)

The **Italian National Recovery and Resilience Plan** mobilises an extraordinary amount of resources equal to about **€ 200 bln** in order to boost the Italian economy **over the period 2021-2026**.



The **National Recovery and Resilience Plan**, whose ultimate goals are to boost the economy and modernise the country, includes a **series of investments and reforms in a multitude of domains, industries and technologies**. The Plan primarily consists of **6 Missions** or Policy Areas which correspond to the 6 pillars of the EU Next Generation Plan. They cascade into **Components** which address specific challenges and are structured into **Investments** and **Reforms**.

In terms of Reforms, the Plan promotes **three different lines of intervention**:



They will significantly improve the general **business environment**, boosting private investments. These reforms are:

- 1. Reform of the judicial system,**
- 2. Reform of the Public Administration,**
- 3. Simplification of the legislation process, and**
- 4. Promotion of competition**

The Italian NRRP (2/2)



The NRRP dedicates the **6th Mission to the health industry, allocating more than € 20 bln**. Among the main interventions, we find **improvement of healthcare assistance, enhancement of biomedical research, and reinforcement of technological infrastructure and equipment**.

Public investments included in the 6th Mission **will significantly boost the Pharma & Biotech industry** and create **new business opportunities for high-tech companies**.

Mission 6 – HEALTH	
COMPONENT 1 PROXIMITY NETWORKS, FACILITIES AND TELEMEDICINE FOR TERRITORIAL HEALTHCARE ASSISTANCE	COMPONENT 2 INNOVATION, RESEARCH AND DIGITALISATION OF NATIONAL HEALTHCARE SERVICE
Investments: <ul style="list-style-type: none"> Community Health House to improve territorial health assistance Homecare as first point of assistance for citizens Strengthening of Intermediate healthcare and its facilities (Community hospital) 	Investments: <ul style="list-style-type: none"> Digital update of hospitals' technological equipment Towards a new safe and sustainable hospital Strengthening of the technological infrastructure and of the tools for data collection, data processing, data analysis and simulation at central level Strengthening and enhancement of the NHS biomedical research Development of technical-professional, digital and managerial skills of professionals in healthcare system
€ 7.00 BLN + € 1.50 React EU + € 0.50 Complementary fund	€ 8.63 BLN + € 0.21 React EU + € 2.39 Complementary fund
Tot. Mission 6 €15.63 BLN + € 1.71 React EU + € 2.89 Complementary fund	

Main incentives schemes



DEVELOPMENT CONTRACT

The **Development Contract** consists of incentives for **one or more connected and functional investment projects** (including R&D) of **at least € 20 mln over 3 years**, presented by one or more companies also in joint form.

The measure consists of a combination of **non-repayable grants and soft loans**. The effective mix of the funds granted can't exceed **75% of the total eligible expenses**.



SMART & START

Smart & Start supports the creation and growth of **innovative startups** with a strong technological dimension for **projects between € 100K and € 1.5 mln**.

The aid consists of **interest-free loans up to 80% of the total investment**. Startups based in Southern Italy repay only the 70% of the loan amount.



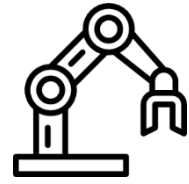
LAW 181/89

The **Law 181/89** is the national incentive scheme dedicated to **increasing industrial development and employment growth in distressed industrial areas**. It is open to **companies of any size**, investing **at least € 1 MLN**. In case of **multiple companies applying as a network** (3 to 6 companies), the **minimum investment is € 1.2 MLN**. Moreover, the scheme provides **support to R&D activities** for those investment plan of **at least € 5 MLN**.

Applying companies can have access to a **mix of grants and soft loans**, which cannot exceed **75% of the total eligible expenses**.

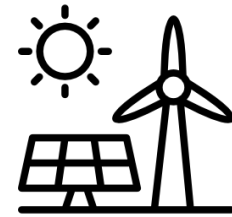
This is a non-exhaustive selection of incentive schemes. Aid intensities indicated may vary depending on location and enterprise size.

Main Fiscal and Employment benefits



CAPITAL GOODS 4.0

Tax credit ranging **from 5% to 20%** for all companies that invest in **new tangible and intangible capital assets** foreseen by the national strategy for Industry 4.0.



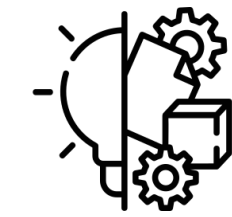
TRANSITION 5.0

Tax credit ranging **from 5% to 45%** for all companies that achieve **energy consumption reductions** by investing in tangible and intangible capital goods 4.0, self-consumption from renewable sources and personnel training.



R&D, INNOVATION AND DESIGN

10% tax credit for investments in R&D (up to a max. of € 5 mln). **5% tax credit for Innovation and Design** (eligible investments up to € 2 mln or € 4 mln).



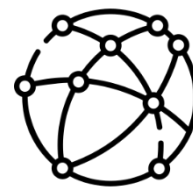
PATENT BOX

Overall **tax deduction equal to 210%** of **R&D expenses** associated with qualified intangible assets: software protected by copyright, industrial patents, designs and models.



SPECIAL ECONOMIC ZONES

Simplified procedures and a **favourable tax regime** are the main characteristics of the Italian SEZ. Companies can benefit from a tax credit on **initial investments of up to € 100 mln.**



RESHORING

Taxation limited to 50% (for 5 years) of the income generated from activities relocated to Italy from countries outside the EU and the European Economic Area.



EMPLOYMENT BENEFITS

50% reduction in social security contributions paid by employers for hiring women and people under 30. In Southern Italy, a **30% reduction** extends to existing employment relationships and all new hires.



EXTRA-DEDUCTION NEW HIRES

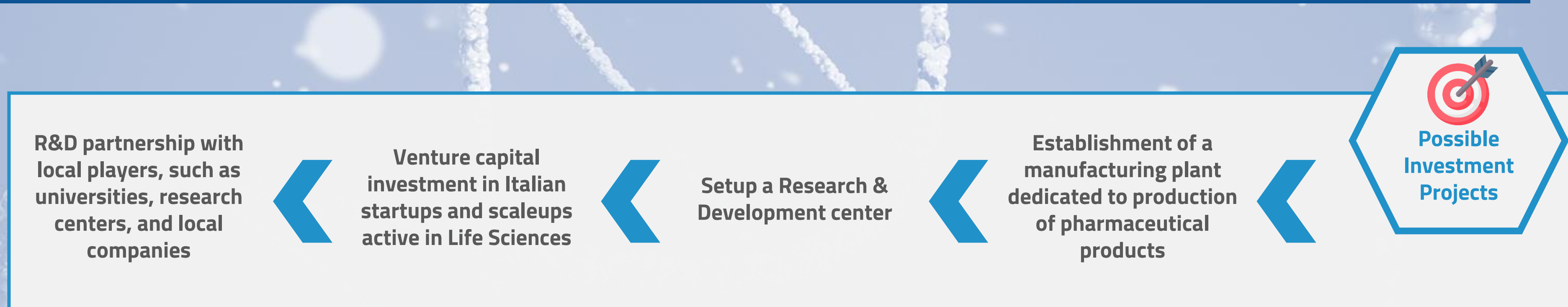
Enhanced tax deduction at 120% for the labor costs related to new hires on permanent contracts.

This is a non-exhaustive selection of fiscal benefits. Percentages indicated may vary depending on investment size and typology.

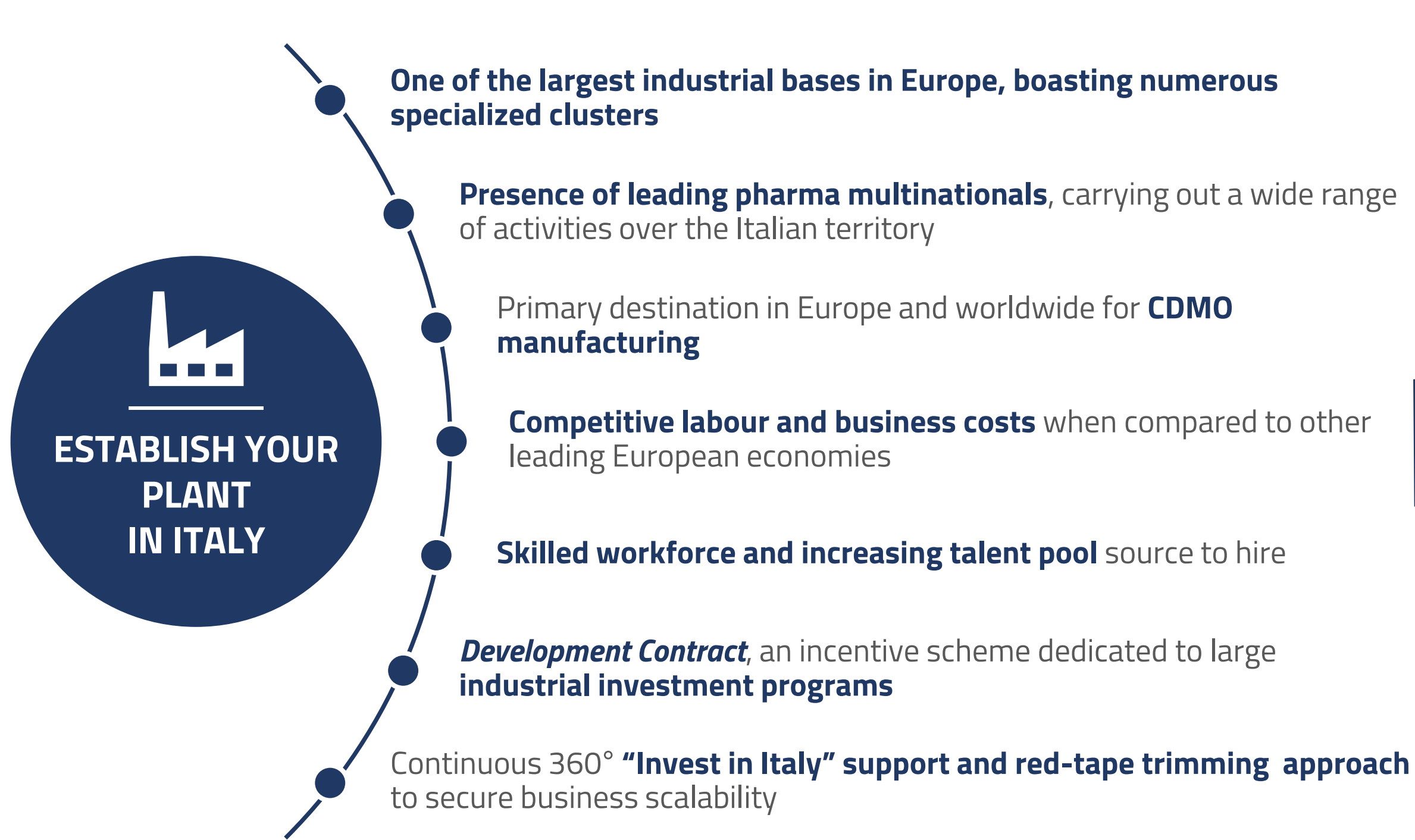
Invest in Italy: key opportunities

Target investors and projects

Who/What are we looking for?



Establishing a Manufacturing Plant



Setting up a Research & Development Center



Some key Italian innovation hubs

Bioindustry Park Silvano Fumero

Turin (Piedmont)



The Bioindustry Park Silvano Fumero is **the ideal place for businesses active in the Life Sciences industry**. Companies located in the park have access to **world-class research, development, training and networking programs**. It hosts a total of **42 firms** and **3 research centers**, and occupies **76,000 sqm of total surface**. The Bioindustry Park also manages **bioPmed**, the Piedmont Life Sciences Cluster, which involves **more than 90 companies** and **25 international partners**.

Milan Innovation District (MIIND)

Milan (Lombardy)



MIIND is a **1 mln sqm district entirely dedicated to innovation and science**, attracting national and international companies and talent. The district hosts **offices, laboratories, university departments and commercial facilities** dedicated to Life sciences and other industries. The District is underpinned by **four major anchors**: the **University of Milan**, building a new education and research campus; the **Galeazzi Ortophaedic Institute**, an internationally recognised research hospital; the **Human Technopole**, a research center of 1,000 researchers; and the **Triulza Foundation**.

Tuscany Life Sciences (TLS)

Siena (Tuscany)



Tuscany Life Sciences is a non-profit Foundation, based in Siena, **supporting R&D activities and innovation in Life Sciences**. It involves **455 people** and hosts **49 companies and research groups**. TLS offers a wide range of services, such as: business development, incubation, research and intellectual property protection. Siena will also host a **national Biotechnopole**, an anti pandemic hub with the goal of supporting and promoting **research, development and manufacturing of vaccines** as well as **monoclonal antibodies**. The project is funded by the **National Recovery Plan**.

Be Factory

Trento (Autonomous Province of Trento)



The Green Innovation Factory has transformed the historical Manifattura Tabacchi of Rovereto in **a centre of industrial innovation**. A place where **big industrial groups, small and medium enterprises**, as well as **innovative startups** can create **productive business synergies**. The hub hosts new low-carbon buildings, occupying **25,000 sqm**, and offers **different services dedicated to innovative firms**: training, consulting, networking and IT services. Be Factory is characterized by four key areas: Life Sciences, Sustainable Mobility, Sport Technology, and Green Building.

Focus on some recent FDIs in Italy

Thanks to its **extremely attractive Life Sciences industry**, over the last years, **Italy has received a significant amount of investments**, being now **home to the activities of worldwide leading multinational enterprises**, such as the following:



Italy is home to one of the main **R&D centers** of the **GSK Group** worldwide as well as to an **international center of excellence for the production of bacterial vaccines**, both located in Siena. Since 2015, GSK has carried out **several investments for the plant of Rosia (Siena)**, amounting to **€510 million in R&D activities** and **€220 million in production activities**.



Eli Lilly, in Italy since 1959, is active in **Florence** with **one of the largest manufacturing facilities** focused on **recombinant-DNA-derived insulin**. Recently, the company has announced **€750 million investments** by 2025, with the goal of **enhancing the production capacity** of **diabetes pharmaceuticals**.



Merck, boasting a **Biotech Excellence Centre in Rome** and a **fill-and-finish facility** in **Bari** that encapsulates the entire production process, exports biotech drugs to over 150 countries. The company has unveiled an investment plan for the **Modugno-Bari production facilities**, committing **€160 million** in resources. The initiative is designed to centralize **60% of the Group's biotech production** in **Apulia**.



Novartis, a **major Italian pharmaceutical group**, conducts **manufacturing and R&D** across Italy, including locations in **Turin, Vercelli, Forlì-Cesena, Isernia, and Naples**. In November 2023, the company revealed plans to invest **€350 million** by 2025, reinforcing R&D and production in **Torre Annunziata (Naples)**, a hub producing **140 million** packages yearly, and **Ivrea (Turin)**, specializing in the **development of radioligands** for **precision oncology**.



Takeda is present in Italy with facilities focused on **plasma-derived drugs**, in **Rieti** and **Pisa**. Rieti and Pisa's plant are recognised as two **excellence hubs** and will be the recipient of new investments announced by the Group for a value of **€ 30 million**, which will **enhance the production capacity thanks to initiatives related to digitalisation and sustainability**.



Illumina, global leader in **Next Generation Genetic Sequencing**, chose to open its first Italian offices in the **Milan Innovation District (MIND)**. The Solution Centre will be dedicated on **genome research** and on the **applications of genomic sequencing**.



With a presence spanning over 20 years, Thermo Fisher's primary facilities in Italy are situated in **Monza** and **Frosinone**, specializing in the **production of sterile injectable drugs** for third parties. In 2021, the company signed a Development Contract for a **€130 million investment**, focused on **strengthening the Frosinone plant** in the **field of immunotherapy**.



Sanofi operates three production plants in Italy: **Varese** (specializing in liquid products), **Frosinone** (a key freeze-drying center in Europe), and **L'Aquila** (large-scale production and packaging of oral solid drugs). Recently, the company invested **€70 mln**, backed by **Innovation Agreements with over €16 million** allocated by MIMIT. These investments facilitated the introduction of new, highly innovative production processes.

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